

1 **DIRECT TESTIMONY OF**
2 **MICHAEL P. WINGO**
3 **ON BEHALF OF**
4 **SOUTH CAROLINA PIPELINE CORPORATION**
5 **DOCKET NO. 2004-6-G**
6

7 **Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND POSITION.**

8 A. My name is Michael P. Wingo, and my business address 1426 Main Street,
9 Suite 155, Columbia, South Carolina 29201. I am employed by SCANA Services
10 Company as General Manager – Gas Supply & Capacity Management.

11 **Q. PLEASE DESCRIBE YOUR EDUCATION AND BUSINESS**
12 **BACKGROUND.**

13 A. I have a Bachelor of Business degree in Marketing from Georgia State
14 University. After graduating from college in 1976, I became employed by Atlanta
15 Gas Light Company (“AGLC”). I held numerous positions during my tenure at
16 AGLC, and in 1998, I became Vice President – Gas Supply for AGLC.

17 **Q. WHEN WERE YOU HIRED BY SCANA AND IN WHAT CAPACITY?**

18 A. In 2000, I joined SCANA Energy Marketing, Inc. in Georgia as Manager of
19 Operations, and in 2001, I was promoted to my current position, General Manager
20 – Gas Supply & Capacity Management, for SCANA Services Company, Inc.

21 **Q. WHAT ARE YOUR DUTIES AS GENERAL MANAGER – GAS SUPPLY &**
22 **CAPACITY MANAGEMENT?**

23 A. I am responsible for gas supply and capacity management functions.
24 Specifically, my responsibilities include forecasting and planning, procurement of
25 supply and capacity, nominations and scheduling, gas cost accounting, regulatory

1 issues both state and federal concerning supply and capacity issues, and structured
2 marketing and asset management.

3 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

4 A. The purpose of my testimony is to discuss SCPC's portfolio of gas supply
5 service options. Specifically, I discuss the various gas supply options available to
6 SCPC, and the gas supply options implemented by SCPC. I also discuss the
7 transportation and storage assets used by SCPC to provide natural gas services to
8 SCPC's firm customers. Furthermore, I discuss the various types of contracts
9 available to SCPC in establishing its gas portfolio. Finally, I discuss SCPC's
10 capacity release program.

11 **Q. WHAT GAS SERVICE OPTIONS ARE AVAILABLE TO SCPC?**

12 A. There are four gas service options available to SCPC. The gas service
13 options are (1) wellhead gas supply; (2) underground storage; (3) pipeline
14 transportation; and (4) liquefied natural gas ("LNG"), which is available from the
15 two (2) interstate pipelines that serve SCPC as well as SCPC's on-system LNG
16 facilities.

17 **Q. PLEASE DESCRIBE SCPC'S GAS SUPPLY PORTFOLIO.**

18 A. SCPC's gas supply portfolio includes each service option discussed above,
19 and SCPC combines these services to meet its firm demand under varying weather
20 conditions at reasonable cost. At December 31, 2003, SCPC had eighteen (18)
21 firm wellhead contracts for a maximum daily quantity of 192,000 Dt per day.
22 Spot wellhead purchases are also made as required to meet system needs.

1 **Q. PLEASE DESCRIBE SCPC'S UPSTREAM FIRM TRANSPORTATION**
2 **CAPACITY CONTRACTS AS WELL AS ITS STORAGE CONTRACTS.**

3 A. Upstream firm transportation capacity contracts total 300,624 Dt per day on
4 the two (2) interstate pipelines that provide service directly to SCPC: Southern
5 Natural Gas Pipeline ("Southern") and Transcontinental Pipeline ("Transco").
6 This upstream firm transportation capacity is exclusive of 51,050 Dt per day
7 secured to serve Plant Urquhart. Production area underground storage contracts
8 total 6,515,450 Dt of storage capacity. The maximum injection and withdrawal
9 rates for these contracts total 46,935 Dt per day and 124,978 Dt per day,
10 respectively. Market area underground storage contracts total 86,564 Dt of
11 storage capacity and maximum injection and withdrawal rates of 506 Dt per day
12 and 3,524 Dt per day, respectively. Exhibit No. __ (MPW-1) provides a summary
13 of the firm transportation and underground storage maximum daily capacity by
14 pipeline supplier.

15 SCPC's on-system LNG facilities have a total storage capacity of 1,880,000
16 Mcf. The maximum liquefaction rate for these LNG plants is 6,000 Mcf or 6,126
17 Dt per day (assuming a Btu of 1.021) and assuming the ability to achieve 100%
18 nameplate capacity, the maximum vaporization rate is 150,000 Mcf or 153,150 Dt
19 per day (assuming a Btu of 1.021). While these facilities have the nameplate
20 capability to vaporize 150,000 Mcf/day, SCPC uses them to provide a 20-day
21 LNG peaking service of 105,000 Mcf/day.

1 **Q. PLEASE BRIEFLY DESCRIBE THE WELLHEAD GAS SUPPLY**
2 **OPTION.**

3 A. Natural gas wells generally produce natural gas at a constant rate year-
4 round, and SCPC possesses the ability to purchase a supply of natural gas directly
5 from the wellhead. Once SCPC purchases a supply of wellhead gas, the interstate
6 pipeline company then transports the gas directly to SCPC's system. As will be
7 discussed more fully below, SCPC may purchase wellhead gas on a firm or spot
8 basis.

9 **Q. PLEASE BRIEFLY DESCRIBE THE UNDERGROUND STORAGE**
10 **OPTION.**

11 A. After purchase, some wellhead gas is stored in underground facilities
12 located nearer the wellheads or closer to the consumer markets. Depending upon
13 location, these underground facilities are referred to as either production area
14 storage or market area storage. Gas stored in these underground facilities can be
15 withdrawn and delivered to SCPC's system during periods of high demand.
16 Additionally, gas can be injected and withdrawn from these facilities in order to
17 "balance" the system on a daily basis.

18 Typically, underground storage facilities operate on an annual cycle.
19 During the summer months, the storage is filled, and in the winter months, the
20 storage is withdrawn.

21 Underground storage is withdrawn at a much faster rate than it can be
22 refilled. Additionally, as gas in storage decreases, the rate at which gas can be

1 withdrawn decreases. Further, as the quantity of gas in storage increases, it
2 becomes more difficult to inject gas into storage and the rate of injection
3 decreases. Accordingly, both injection and withdrawal rates ratchet (the reduced
4 ability to withdraw or inject gas into storage) and decline with increasing or
5 decreasing storage inventory levels respectively.

6 **Q. WHERE DOES SCPC TYPICALLY STORE ITS GAS AFTER**
7 **PURCHASE?**

8 A. During the period under review and currently, SCPC maintains contract
9 storage with the interstate pipelines at the following facilities: Southern's storage
10 located in Prarie County, Mississippi (Muldon Storage Field) and Bienville
11 Parrish, Louisiana (Bear Creek Storage Field); and Transco's storage located in St.
12 Landry Parrish, Louisiana (Washington Storage Field); Covington County,
13 Mississippi (Eminence Storage Field); Potter & Clinton Counties, Pennsylvania
14 (Wharton/Leidy Storage Fields known as GSS); and Carlstadt County, New Jersey
15 (LGA LNG facility). These storage assets allow the Company to flow additional
16 volumes of gas into SCPC's system when needed. They also allow SCPC to
17 balance wellhead supply with system load requirements, thereby mitigating the
18 potential for imbalance charges. In aggregate, as reflected on Exhibit No. ____
19 (MPW-2), the Company subscribes to 6,602,014 million Dt of interstate storage
20 capacity.

1 **Q. HAVE YOU PREPARED EXHIBITS SHOWING THE GEOGRAPHIC**
2 **LOCATION OF SCPC'S CONTRACTED INTERSTATE STORAGE**
3 **ASSETS?**

4 A. Yes. As I stated above, on Southern's pipeline system, SCPC has
5 contracted for capacity in two storage facilities. Exhibit No. ____ (MPW-3) shows
6 both the Muldon and Bear Creek Storage Fields comprising Southern's Customer
7 Storage Service ("CSS") and CSS injection and withdrawal capabilities.

8 The Company has also contracted for capacity in four storage facilities on
9 Transco's pipeline system. These are as follows:

- 10 • Exhibit No. ____ (MPW-4) depicts the approximate location of the
11 Washington Storage Field near St. Landry Parish, Louisiana.
- 12 • Exhibit No. ____ (MPW-5) depicts the general location of Transco's
13 Eminence Storage Field in Covington County, Mississippi.
- 14 • Exhibit No. ____ (MPW-6) shows the general location of Transco's
15 Wharton/Leidy Storage Fields (GSS Storage Service) in Potter and
16 Clinton Counties, Pennsylvania.
- 17 • Finally, Exhibit No. ____ (MPW-7) shows the general location of
18 Transco's LGA LNG facility located in Carlstadt, New Jersey.

19 All of these interstate assets are critical and necessary components of
20 SCPC's strategy to provide reliable and secure supplies of natural gas to its firm
21 customers pursuant to the terms of its firm contracts.

1 **Q. WHAT INTERSTATE STORAGE ASSETS ARE AVAILABLE TO THE**
2 **COMPANY TO AID IN DELIVERING RELIABLE AND SECURE GAS**
3 **SERVICE TO SOUTH CAROLINA CUSTOMERS?**

4 A. Currently, the Company subscribes to 5,060,885 Mcf (5,167,164 Dt) of
5 storage on Southern's system, with maximum daily withdrawal capability from
6 this storage equaling 102,191 Mcf per day (104,337 Dt per day) at peak storage
7 inventory and maximum daily injection capability of 38,929 Mcf per day (39,747
8 Dt per day). On Transco, SCPC subscribes to 1,386,329 Mcf (1,434,850 Dt per
9 day) of storage, with a maximum withdrawal quantity of 23,348 Mcf per day
10 (24,165 Dt per day) of which 19,943 Mcf per day (20,641 Dt per day) is delivered
11 within firm transportation service and 3,405 Mcf per day (3,524 Dt per day) is in
12 addition to firm transportation service. The maximum daily injection capability
13 into Transco storage is 7,395 Mcf per day (7,654 Dt per day). Exhibit No. __
14 (MPW-2) reflects total storage capacity in a table format.

15 **Q. PLEASE DESCRIBE THE LNG OPTION.**

16 A. As Mr. Fant stated in his direct testimony, SCPC has two LNG facilities,
17 one at Bushy Park near Charleston and the other at Salley, in Orangeburg County.
18 The Bushy Park facility can liquefy and store up to 980,000 Mcf of LNG, while
19 Salley can store up to 900,000 Mcf of trucked-in LNG. Salley currently has no
20 liquefaction facilities. Exhibit No. __ (MPW-2) attached hereto sets forth the
21 operational capacity of intrastate LNG storage and Exhibit No. __ (MPW-8)
22 graphically depicts the general location of SCPC's intrastate LNG storage

1 facilities at Bushy Park and Salley, and shows the combined capacity of these
2 LNG facilities.

3 SCPC's intrastate LNG storage provides service from facilities directly
4 connected to the Company's system and is normally used for needle peak demand,
5 which is the last increment of demand on the coldest hours or days of the winter.
6 This on-system LNG service significantly adds to the reliability and security of
7 gas supply during unfavorable operating conditions that may occur from time to
8 time. For example, SCPC's supply of gas could be unexpectedly interrupted
9 because of a hurricane in the Gulf, or because abnormally cold weather creates a
10 spike in demand which in turn causes equipment malfunctions, well freeze-ups,
11 and other operational abnormalities thereby limiting the supply of gas into South
12 Carolina. In these instances, SCPC could employ the use of its on-system LNG
13 facilities for a limited time to offset any adverse effects caused by an upstream
14 interruption.

15 **Q. WHY DOES SCPC FIND IT NECESSARY TO STORE GAS FOR LATER**
16 **USE?**

17 A. The storage of natural gas is both a beneficial and critical function to the
18 operation of SCPC's gas transmission system. Storage primarily serves as an
19 available supply of gas to SCPC's existing wintertime wellhead gas supplies.
20 However, storage also serves other useful purposes. For example, storage
21 provides added reliability to the system in the event a disruption occurs in SCPC's
22 wellhead supplies. Moreover, SCPC's on-system LNG storage provides an added

1 measure of reliability for interstate capacity disruptions because interstate pipeline
2 outages have no effect upon LNG storage.

3 Storage also allows SCPC to “balance” daily differences between the
4 quantities of wellhead gas purchased and the quantities of wellhead gas consumed
5 by SCPC’s customers. Additionally, because wellhead gas purchases seldom
6 match a customer’s usage from one day to the next, storage acts as a supplement to
7 wellhead gas purchases in the event a customer’s daily consumption of gas
8 exceeds SCPC’s wellhead gas purchases for that day. Conversely, storage absorbs
9 any unused wellhead gas purchases in the event a customer uses less gas than
10 actual wellhead gas purchases.

11 Finally, in some instances, storage provides a price benefit to SCPC and its
12 customers. For example, by storing gas during summer months when natural gas
13 prices are usually at their lowest, SCPC is able to reduce the quantity of wellhead
14 gas purchases required during the winter when wellhead gas prices are
15 traditionally at their highest due to high demand.

16 **Q. HOW DOES SCPC UTILIZE ITS COMBINED INTERSTATE STORAGE**
17 **AND INTRASTATE LNG TO ASSURE RELIABLE AND SECURE GAS**
18 **SERVICE?**

19 A. There are two dimensions to storage services: peak capability and duration.
20 SCPC uses its storage to address both of these dimensions. Certain storage
21 services are geared toward providing large withdrawal quantities to meet spikes in
22 demand on very cold days but only for a short period of time. The storage

1 services in SCPC's portfolio of this type include Transco LGA, Transco ESS and
2 both the Bushy Park and Salley LNG facilities located on SCPC's system.
3 Accordingly, these storage services provide SCPC with peak capability.

4 Other storage services are geared toward meeting demand over more of the
5 winter period and not only on the coldest days. The storage services in SCPC's
6 portfolio of this type include Transco WSS, Transco GSS and Southern's CSS.
7 Therefore, these storage services provide SCPC with duration capability. Through
8 the active management of all these assets, SCPC is able to meet the needs of its
9 customers on the coldest days of the winter and over the entire winter.

10 To illustrate the importance of actively managing these assets over a winter
11 period, I have prepared Exhibit No. ____ (MPW-9) and Exhibit No. ____ (MPW-10).
12 Assuming inventory levels of one hundred percent (100%) in all interstate storage
13 services on the traditional first day of the winter season (i.e. November 1) and
14 withdrawing gas from these storage services at maximum capability beginning on
15 November 1, SCPC begins the winter heating season with the ability to withdraw
16 128,502 Dt per day from interstate storages. By January 5, SCPC's capability to
17 withdraw gas from storage is reduced from 128,502 to only 10,350 Dt per day and
18 by February 23, all interstate storage capability is exhausted. The following table
19 reflects the ratchets and the depletions of storage under these assumptions and
20 Exhibit No. ____ (MPW-9) shows a graphic representation of the same data.

		Max		
		Withdrawal	Withdrawal Reduction	Capability
	<u>Date</u>	<u>Available</u>	<u>Due to:</u>	<u>Lost</u>
	1-Nov	128,502	Storages 100% Full	
	6-Nov	126,432	LGA Depleted	2,070
	11-Nov	121,012	ESS Depleted	5,420
	18-Nov	119,409	WSS Ratchet	1,603
	21-Nov	106,889	CSS Ratchet	12,520
	26-Nov	96,395	CSS Ratchet	10,494
	7-Dec	95,098	WSS Ratchet	1,297
	13-Dec	72,203	CSS Ratchet	22,895
	24-Dec	70,749	GSS Depleted	1,454
	28-Dec	68,778	WSS Ratchet	1,971
	4-Jan	10,350	CSS Depleted	58,428
	22-Jan	8,347	WSS Ratchet	2,003
	23-Feb		0 WSS Depleted	-

As I stated above, SCPC also owns LNG storage facilities attached directly to its system. The Bushy Park and Salley LNG facilities provide a combined capability of 150,000 Dt per day but their duration is very limited. Again, assuming the maximum inventory in each of these facilities on November 1 and withdrawing gas from these facilities at maximum capability, Salley LNG would be depleted by November 11 and Bushy Park would be depleted by November 17. The following table reflects the ratchets and the depletions under these assumptions and Exhibit No. ____ (MPW-10) graphically depicts the same data.

		Max		
		Withdrawal	Withdrawal Reduction	Capability
	<u>Date</u>	<u>Available</u>	<u>Due to:</u>	<u>Lost</u>
	1-Nov	150,000	LNG 100% Full	
	11-Nov	60,000	Salley LNG Depleted	90,000
	17-Nov		0 Bushy Park LNG Depleted	60,000

1 **Q. PLEASE DESCRIBE THE AVAILABLE INTERSTATE PIPELINE**
2 **TRANSPORTATION OPTION.**

3 A. SCPC contracts for interstate pipeline transportation capacity on both a firm
4 and interruptible basis.

5 Interstate Firm Transportation ("FT") service permits the customer access
6 to the interstate pipeline transportation capacity on a priority basis. On the other
7 hand, interstate Interruptible Transportation ("IT") service is only available when
8 pipeline FT customers, such as SCPC, are not using their FT capacity. IT service
9 is curtailed when FT customers use their capacity. In other words, FT and IT
10 services use the same physical pipeline capacity, with FT service having priority.
11 SCPC contracts for FT service from the pipelines to assure delivery of natural gas
12 during colder periods when the full transportation capacity of the pipeline is used.

13 The FT service contract demand volume, which provides priority to the
14 interstate pipeline capacity, determines the fixed cost of gas transportation service
15 to SCPC under the interstate pipeline company's rates filed with and approved by
16 the Federal Energy Regulatory Commission. This fixed cost is paid every month
17 regardless of the quantity of gas actually transported by SCPC. Additionally, the
18 interstate pipeline companies have a variable charge associated with each Dt of
19 gas transported by them on behalf of SCPC. This cost increases or decreases
20 monthly depending upon usage.

1 **Q. PLEASE DESCRIBE THE CONSIDERATIONS EVALUATED BY SCPC**
2 **IN ASSEMBLING ITS GAS SUPPLY PORTFOLIO.**

3 A. The Company begins its evaluation by reviewing the gas supply, storage,
4 transportation, and other assets already under contract. Other considerations
5 include such things as geographical delivery limitations, maximum volumes,
6 storage ratchets, must-take volumes, and the cost of the various services. SCPC
7 then compares the resources to the varying weather conditions. Finally, the
8 Company determines whether additional resources are required under the varying
9 weather conditions.

10 **Q. PLEASE DESCRIBE THE PROPOSED USE OF EACH OF THESE**
11 **VARIOUS SERVICES WITHIN THE PORTFOLIO.**

12 A. SCPC places different levels of reliance on its various supply sources based
13 on the time of year in question. In the early part of the winter, SCPC seeks to use
14 its wellhead gas as its principal supply. To the extent that wellhead gas is not
15 sufficient, SCPC then uses the natural gas stored in underground storage facilities
16 in descending order of the duration of their supply capability. Lastly, SCPC uses
17 on-system LNG to meet the last increment of demand on the coldest days or hours
18 of the year.

19 As the winter progresses, this order of usage may be modified under certain
20 circumstances to take advantage of economic opportunities. For example, if South
21 Carolina experiences mild weather during the early part of the winter and storage

1 inventories are relatively high, then underground storage withdrawals may be used
2 instead of wellhead supply.

3 **Q. WOULD YOU ELABORATE FURTHER ON VARIOUS WEATHER**
4 **CONDITIONS CONSIDERED IN THE PLANNING PROCESS?**

5 A. Yes. Winter weather in South Carolina is highly volatile. Temperatures
6 may range from unseasonably warm to frigid cold in a very short period. In
7 addition, weather in a winter month such as January may change dramatically
8 from year to year. Exhibit No. ____ (MPW-11) provides the actual heating degree
9 days for the Columbia area for each January from 1956 through 2004.

10 **Q. BRIEFLY DESCRIBE A HEATING DEGREE DAY.**

11 A. Heating degree day is an industry accepted measure of the potential heating
12 demands that weather conditions create. Simply stated, a heating degree day is a
13 comparative measure of cold weather.

14 In order to calculate the number of heating degree days experienced in a
15 twenty-four (24) hour period, simply subtract the average temperature for a
16 twenty-four (24) hour period from sixty-five (65) degrees Fahrenheit.
17 Accordingly, the result of this calculation is the total number of heating degree
18 days experienced during that particular twenty-four (24) hour period. The greater
19 the number of heating degree days experienced, the colder the weather during that
20 period.

1 **Q. HOW DOES THIS TYPE OF WEATHER VARIATION AFFECT GAS**
2 **SUPPLY REQUIREMENTS?**

3 A. The volatility of winter weather in South Carolina requires SCPC to
4 maintain a flexible gas services portfolio. The portfolio must be capable of
5 meeting both large swings in firm demand from day to day within the winter
6 season, and swings over a winter season, which can range from warmer than
7 normal to colder than normal.

8 **Q. PLEASE DESCRIBE SCPC'S WELLHEAD GAS SUPPLY CONTRACTS.**

9 A. SCPC has entered into firm long-term contracts for gas supply at the
10 wellhead with various producers and marketers. At December 31, 2003, SCPC
11 had eighteen firm wellhead supply arrangements under contract or under
12 negotiation. The contracts are for varying amounts of flowing gas and have
13 varying expiration dates. The prices under most of SCPC's contracts are based on
14 monthly spot prices; however, SCPC has the option to negotiate a monthly price
15 using various benchmark prices. The commodity price represents the value of
16 spot gas in the market and the reservation fee is based on the length of the firm
17 supply commitment and the take flexibility. The volumes under contract represent
18 purchases from major oil and gas producers, independent producers, pipeline
19 affiliates, and national marketers. During the review period, SCPC utilized two
20 types of firm supply contracts: baseload and daily flexibility.

1 **Q. PLEASE DESCRIBE A FIRM BASELOAD CONTRACT.**

2 A. A baseload contract is the least flexible supply contract. Suppliers prefer to
3 operate their wells at consist levels and therefore match the preferred operating
4 characteristics of a producing gas well. Under this contract, the supplier has an
5 obligation to furnish gas and SCPC has an obligation to purchase the contract
6 quantity every day for the term of the contract.

7 **Q. PLEASE DESCRIBE FIRM CONTRACTS WITH DAILY FLEXIBILITY.**

8 A. Daily flexibility allows SCPC to nominate for delivery a quantity of gas
9 between zero and the daily contract maximum each day. This type of contract
10 allows SCPC to respond to both increases and decreases in demand within the
11 same delivery month.

12 **Q. ARE THERE OTHER TERMS ASSOCIATED WITH FIRM GAS SUPPLY**
13 **CONTRACTS?**

14 A. Yes. Beyond take flexibility provisions as described above, gas supply
15 contracts typically include performance standards, penalty provisions, reservation
16 fees, and other miscellaneous terms. Each provision affects the value of the
17 contract in the portfolio.

18 **Q. PLEASE DESCRIBE A SPOT PURCHASE.**

19 A. In a spot purchase, the buyer agrees to buy and the seller agrees to sell on a
20 best effort basis. Generally, if the buyer and seller agree on a volume and price,
21 the sale is effective for a specific period or until either party chooses to end the
22 arrangement.

1 **Q. DOES SCPC MAKE SPOT GAS PURCHASES AS PART OF ITS**
2 **PORTFOLIO?**

3 A. SCPC has the ability to purchase spot gas from approximately fifty-five
4 (55) different suppliers.

5 **Q. BRIEFLY DESCRIBE CAPACITY RELEASE.**

6 A. Southern and Transco offer capacity release through which SCPC possesses
7 the ability to resell all or part of its idle firm transportation capacity to any entity
8 who wants to obtain that capacity by contracting with Southern or Transco.

9 **Q. PLEASE DESCRIBE CAPACITY RELEASE AVAILABLE UNDER FERC**
10 **PROCEDURES.**

11 A. The capacity release market permits SCPC to buy or sell firm interstate
12 pipeline transportation capacity through the interstate pipelines' capacity release
13 bulletin boards. The capacity release mechanism creates an open, competitive
14 market for selling capacity. Shippers acquiring released capacity are billed by and
15 make payments directly to the interstate pipeline for the capacity release. The
16 interstate pipeline then credits SCPC's transportation invoice in the amount of the
17 capacity release payments.

18 **Q. WHAT DETERMINES AVAILABLE CAPACITY RELEASE?**

19 A. The availability of capacity release is influenced by many factors such as
20 the weather and market conditions. If weather is colder than normal, firm supply
21 services will consume more of the portfolio and limit capacity available for
22 capacity release transactions because SCPC's portfolio is assembled to meet the

1 firm demand of its customers. If a cold winter were to occur, SCPC would use
2 essentially all of its firm supply services and then purchase additional quantities of
3 spot gas to meet firm demand. As a result, capacity release credits will necessarily
4 lag as those assets are used to serve native load due to the colder weather.

5 **Q. UNDER WHAT CONDITIONS WILL SCPC RELEASE CAPACITY?**

6 A. SCPC can release capacity when it is not required to meet system supply
7 needs. The level of the credits resulting from capacity release depends
8 significantly on the market for, the duration of, and conditions placed on, the
9 released capacity. SCPC's strategy is to undertake to balance the benefits of the
10 revenue contributions from capacity release with SCPC's need to preserve
11 flexibility and reliability to meet system sales requirements. Furthermore, as
12 discussed by Mr. Conard in his direct testimony, credits associated with released
13 firm capacity are included in the monthly weighted average cost of gas
14 ("WACOG").

15 **Q. WHAT REQUEST DO YOU HAVE OF THE COMMISSION IN THIS**
16 **PROCEEDING?**

17 A. During the period under review, SCPC contracted for sufficient supplies of
18 natural gas and provided reliable service to its customers. At no time during the
19 period under review was SCPC forced to curtail gas service to any of its firm
20 service customers. Therefore, SCPC adequately maintained gas, storage, and
21 transportation assets for its system during the period under review at levels that
22 were prudent and reasonably met the reliability needs of the system. Further, it is

1 my opinion that SCPC's management of these assets during the period under
2 review has been prudent and reasonable. Therefore, I respectfully request the
3 Commission to find that SCPC's policies and practices to be reliable and prudent.

4 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

5 **A. Yes.**

South Carolina Pipeline Company
Existing Firm Transportation and Storage Contracts

		Maximum Firm Transportation Dt/Day	Production Area Storage Maximum Withdrawal Dt/Day	Market Area Storage Maximum Withdrawal Dt/Day	Expiration Date
Southern					
FSNG214-1 FT	Firm Transportation	44,650			December 31 2005
FSNG214-2 FT	Firm Transportation	22,684			October 31, 2007
FSNG214-3 FT	Firm Transportation	5,105			December 31 2005
FSNG214-4 FTNN	Firm Transportation	84,521			October 31, 2007
FT	Firm Transportation	34,988			October 31, 2006
	CSS		102,100		October 31, 2006
	CSS		2,237		October 31, 2005
Transco					
.3704 Z1 - Z5	Firm Transportation	5,155			December 31 2008
.3704 Z2 - Z5	Firm Transportation	7,582			December 31 2008
.3704 Z3 - Z5	Firm Transportation	5,762			December 31 2008
.3704 Z3 - Z5	Firm Transportation	11,827			December 31 2008
2.0764 Station 65 (Sunbelt)	Firm Transportation	68,887			October 31, 2017
2.0764 Station 85 (Sunbelt)	Firm Transportation	9,463			October 31, 2017
	WSS		15,221		March 31, 2005
	ESS		5,420		October 31, 2013
	GSS			791	March 31 2013
	GSS			663	See Note 1
	LGA			2,070	October 31, 2016
Company Owned LNG				153,150	
Totals		300,624	124,978	156,674	

Note 1: Service is being provided under NGA authority

INTERSTATE STORAGE AND LNG STORAGE

I. Storage

Pipeline	Type	MSQ	MDWQ
Southern	CSS	5,167,164	104,337
Transco	ESS	54,536	5,420
Transco	GSS	43,409	791
Transco	GSS	32,805	663
Transco	WSS	1,293,750	15,221
Transco	LG-A	10,350	2,070
<u>Total Transco</u>		<u>1,434,850</u>	<u>24,165</u>
Total Interstate Storage		6,602,014	128,502

II. SCPC LNG (in mcf)

SCPC	LNGS	1,880,000	150,000
------	------	-----------	---------

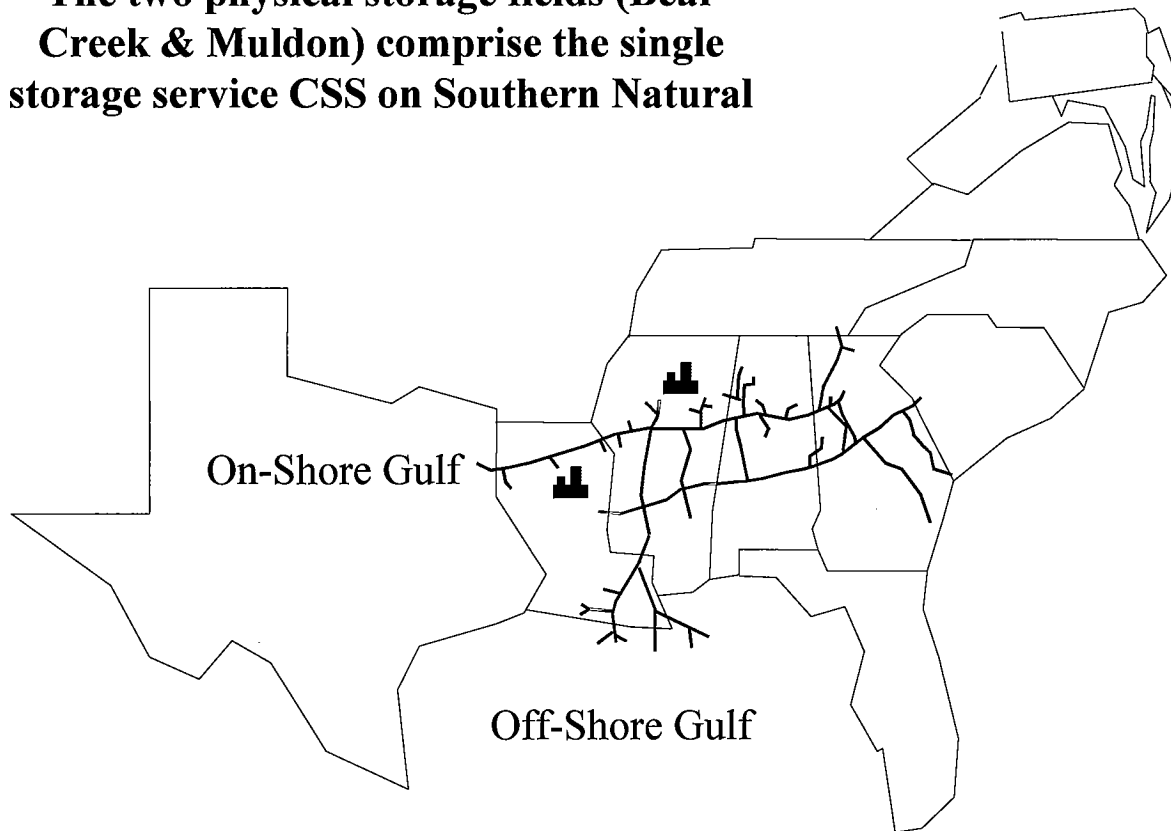
Note: All values are stated in Dt, unless otherwise noted

The two physical storage fields (Bear Creek & Muldon) comprise the single storage service CSS on Southern Natural

CSS Injections

<u>% Inv</u>	<u>Max Inj</u>
0-20	39,747
21-40	37,362
41-60	34,977
61-80	32,195
81-100	29,810

150 days to refill
from empty



CSS Maximum Storage Capacity 5,167,164

CSS Withdrawals

<u>% Inv</u>	<u>Max W/D</u>
60-100	104,337
50-59	91,817
25-49	81,323
0-24	58,428

63 days to deplete
from full

WSS Injections

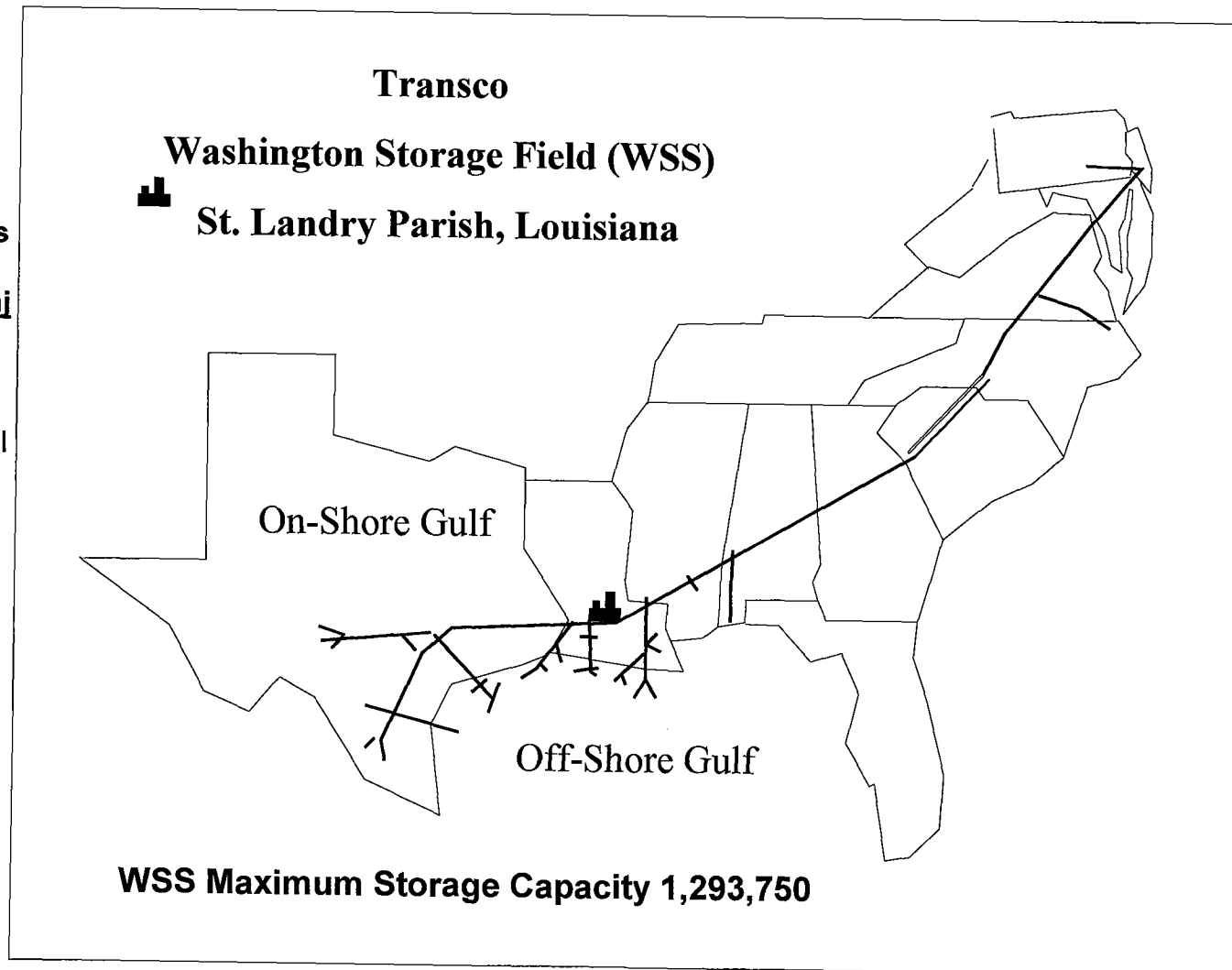
<u>% Inv</u>	<u>Max Inj</u>
0-50	7,188
50-100	6,046

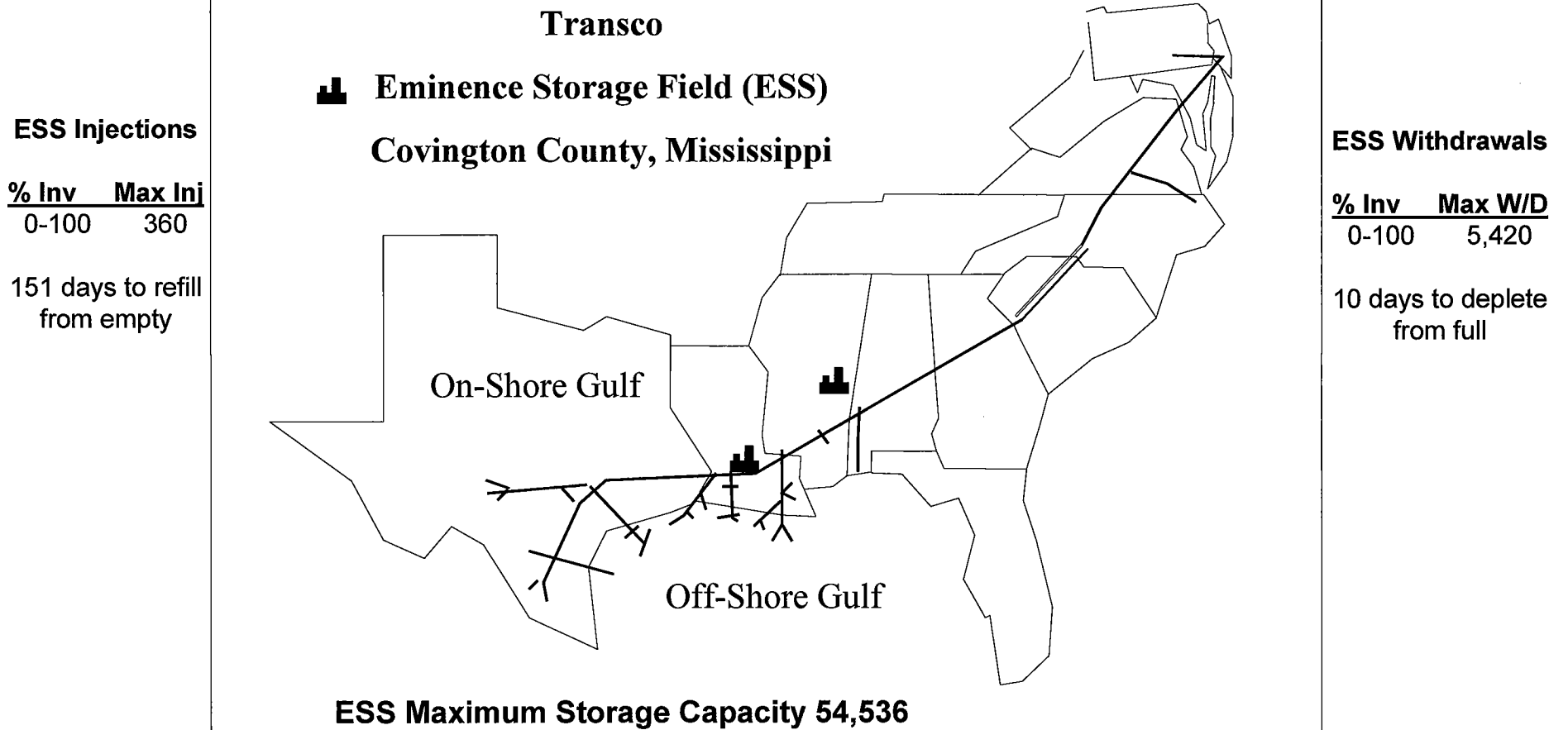
197 days to refill
from empty

WSS Withdrawals

<u>% Inv</u>	<u>Max W/D</u>
81-100	15,221
80-61	13,618
41-60	12,321
21-40	10,350
0-20	8,347

114 days to deplete
from full



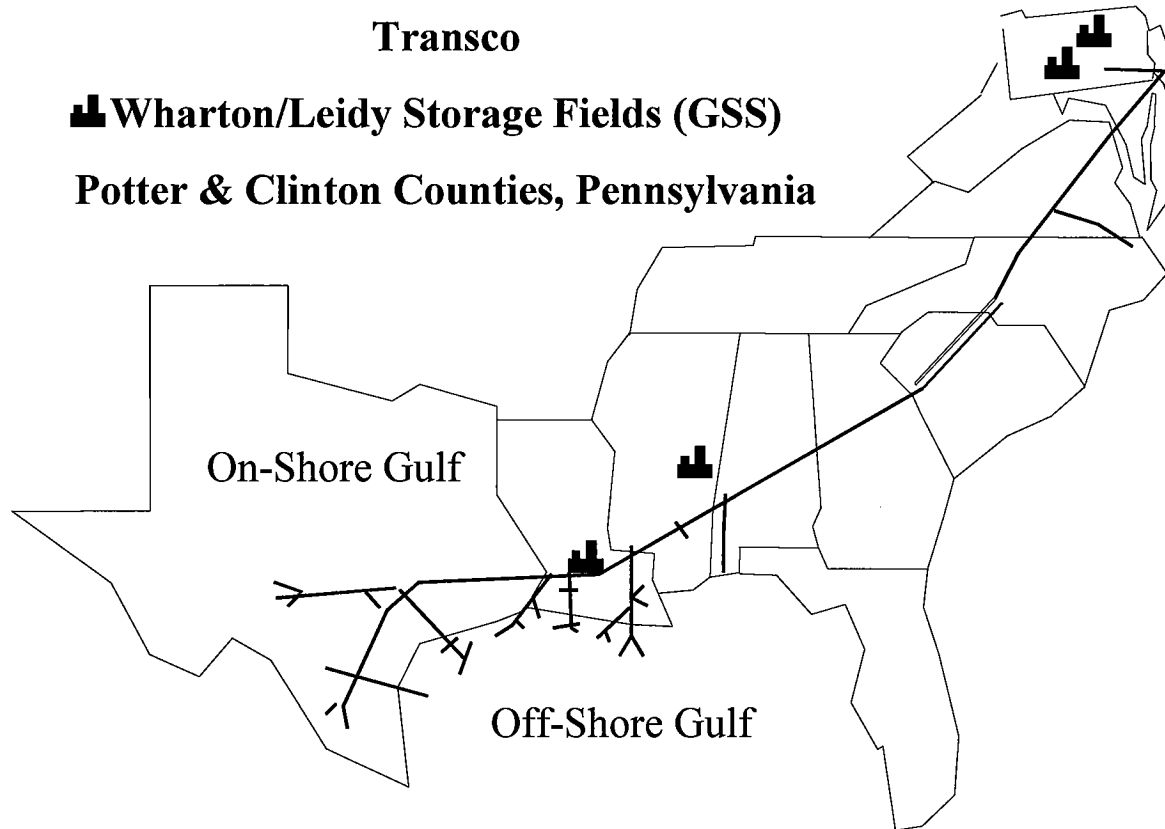


GSS Injections

<u>% Inv</u>	<u>Max Inj</u>
0-50	444
50-100	356

193 days to refill
from empty

Transco
Wharton/Leidy Storage Fields (GSS)
Potter & Clinton Counties, Pennsylvania

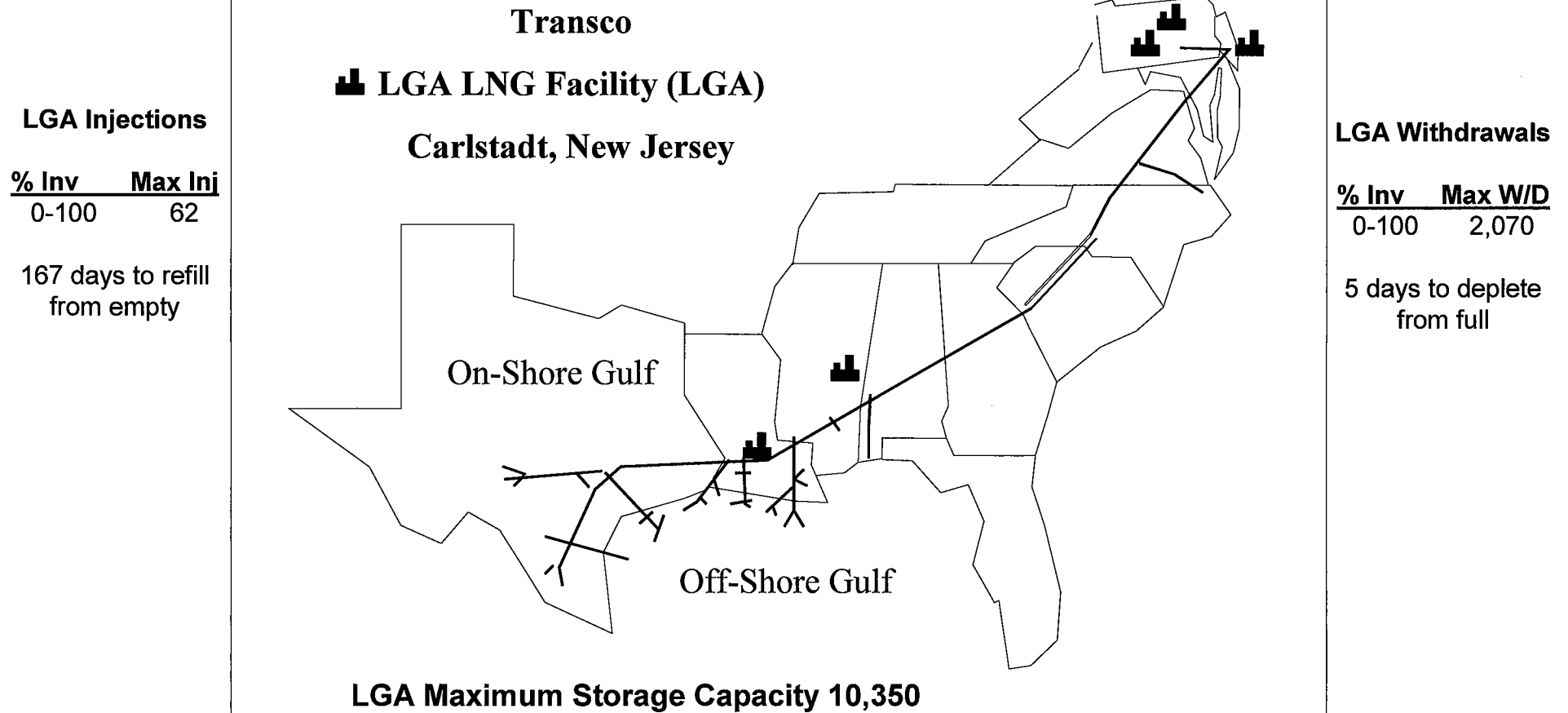


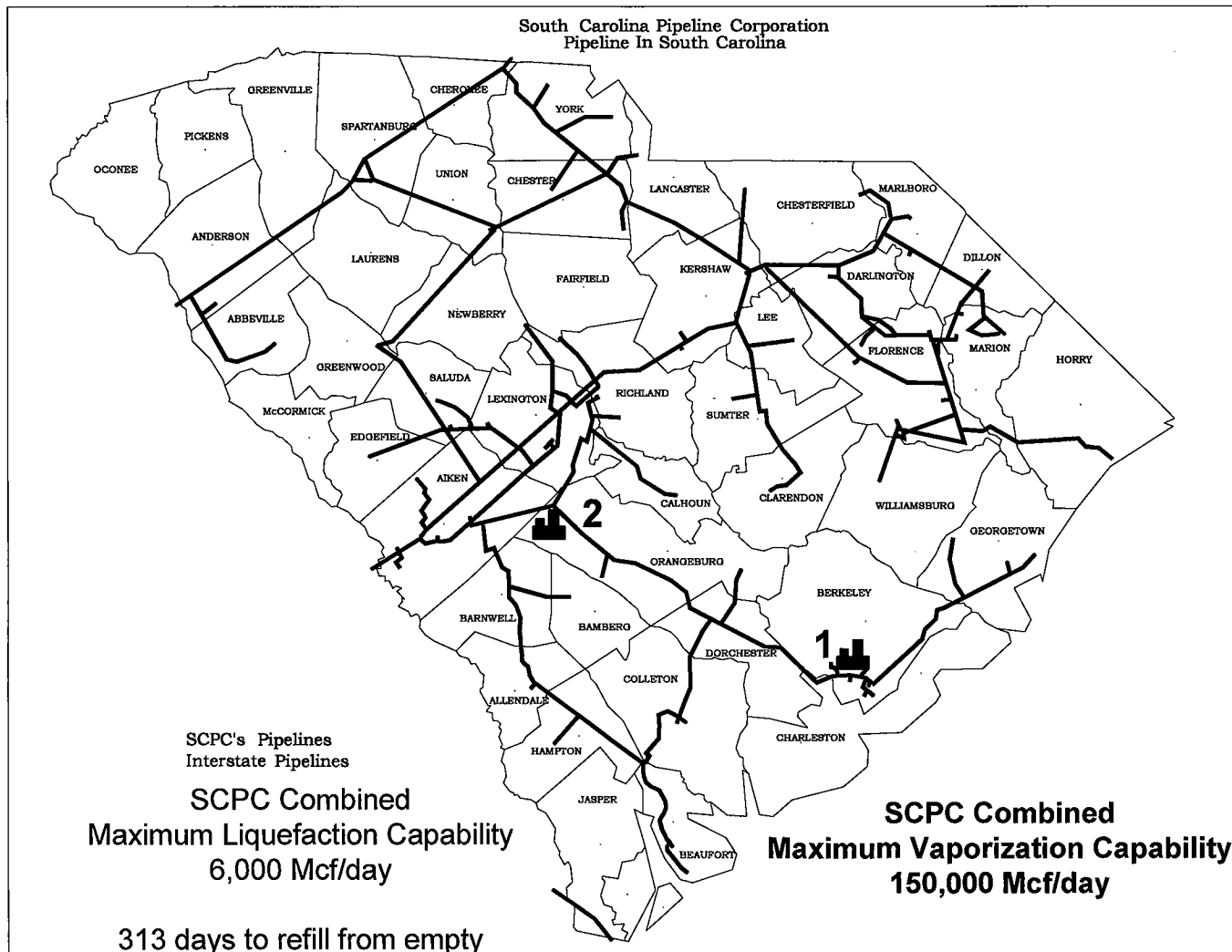
GSS Maximum Storage Capacity 76,214

GSS Withdrawals

<u>% Inv</u>	<u>Max W/D</u>
0-100	1,454

52 days to deplete
from full





SCPC

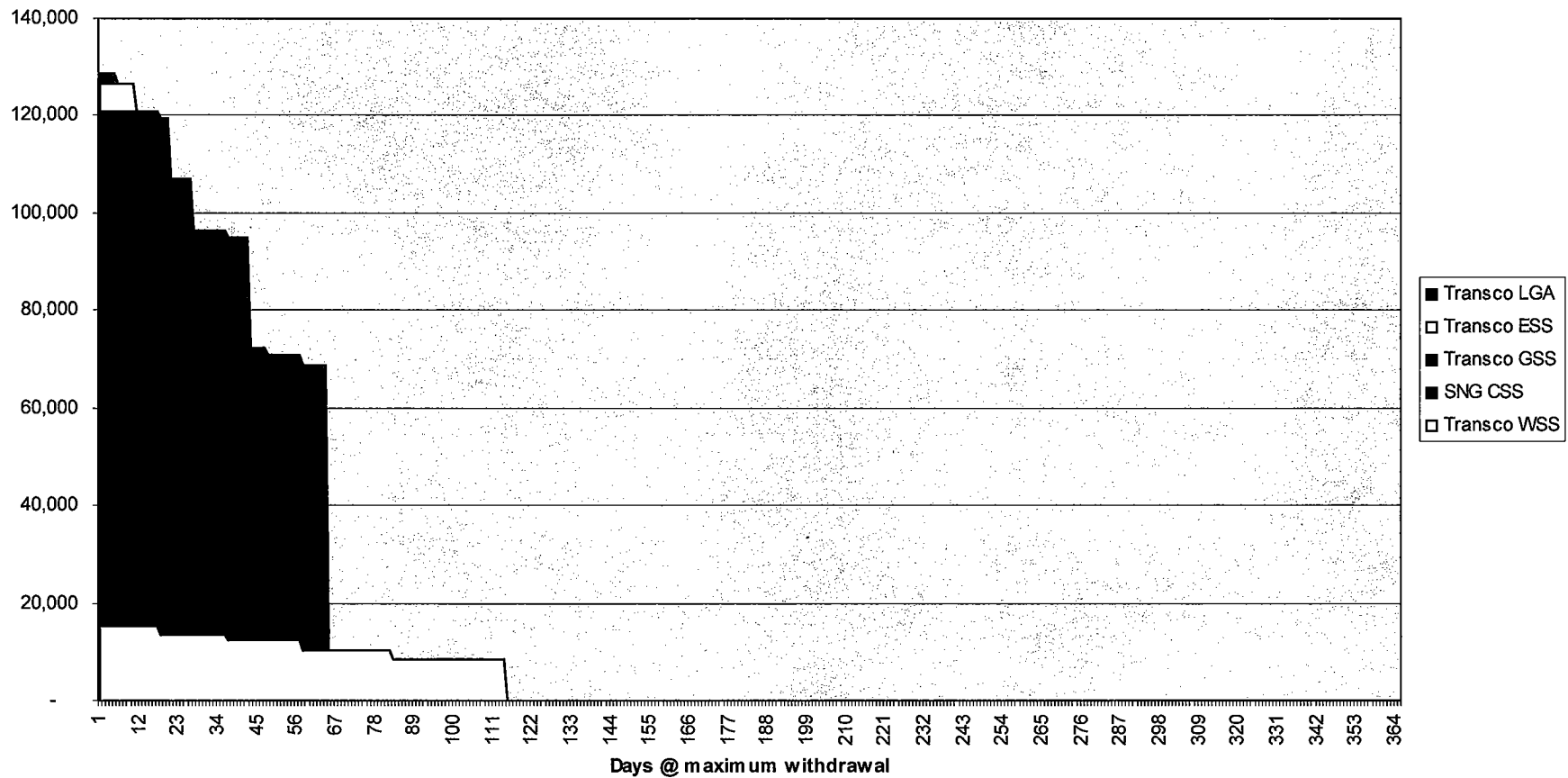
Combined LNG

1 Bushy Park

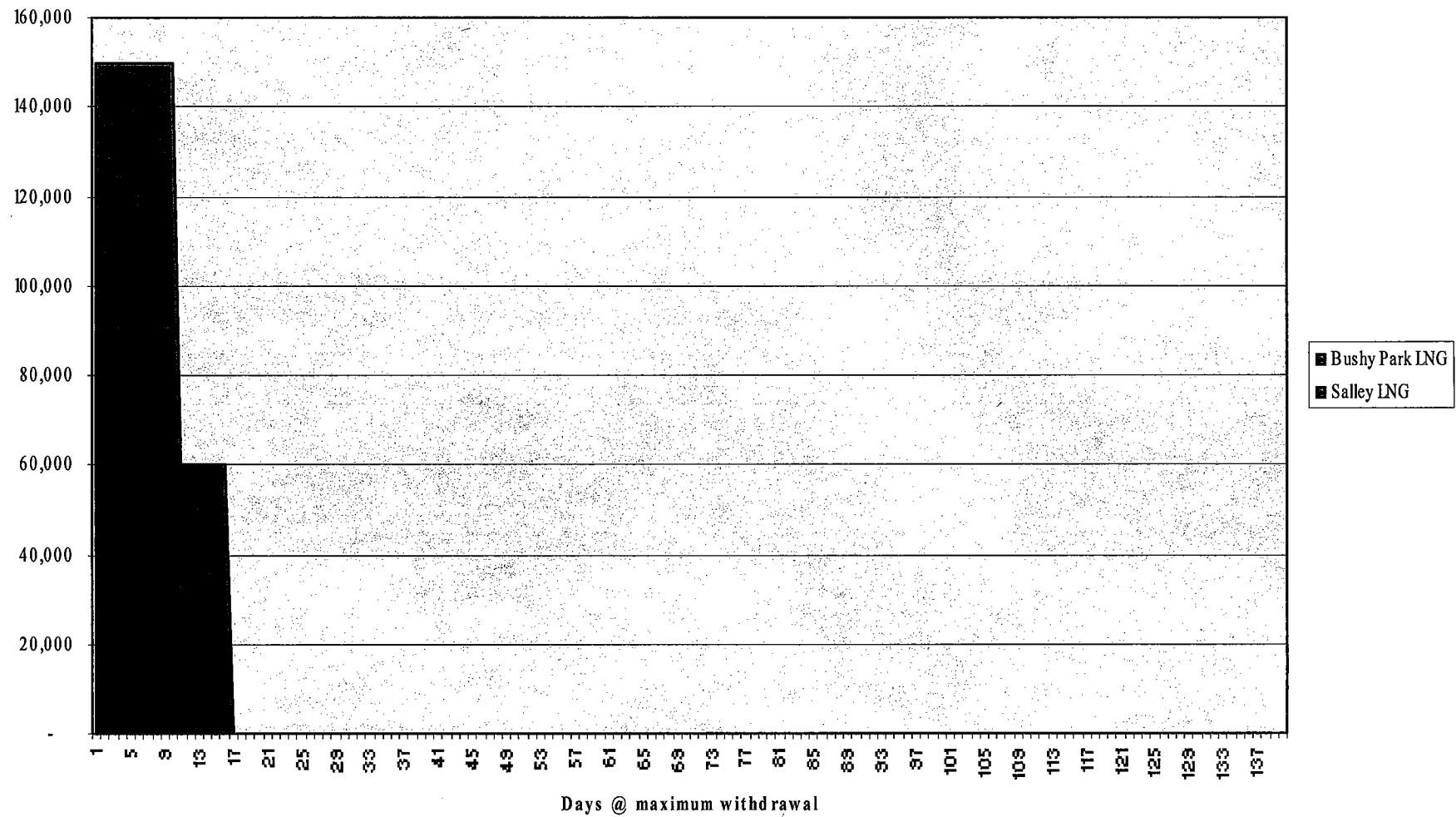
2 Salley

**Combined
Maximum Storage
Capacity
1,880,000 Mcf**

Interstate Storage Supply Duration



SCPC LNG Storage Supply Duration



ACTUAL COLUMBIA
HEATING DEGREE DAYS

YEAR	JANUARY	YEAR	JANUARY
*****	*****	*****	*****
1956-57	531	1980-81	809
1957-58	766	1981-82	748
1958-59	630	1982-83	739
1959-60	603	1983-84	717
1960-61	728	1984-85	792
1961-62	620	1985-86	731
1962-63	726	1986-87	657
1963-64	640	1987-88	780
1964-65	592	1988-89	469
1965-66	759	1989-90	393
1966-67	554	1990-91	571
1967-68	732	1991-92	574
1968-69	683	1992-93	509
1969-70	823	1993-94	687
1970-71	602	1994-95	596
1971-72	429	1995-96	655
1972-73	618	1996-97	567
1973-74	199	1997-98	512
1974-75	417	1998-99	485
1975-76	662	1999-00	672
1976-77	901	2000-01	645
1977-78	850	2001-02	537
1978-79	664	2002-03	700
1979-80	641	2003-04	661
		CURRENT 30 YR AVG	645
		Minimum	199
		Maximum	901